

Runner-up Technology
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Novel Human IGF-1 and IGF-II specific Human Monoclonal Antibodies as Potential
Anti-tumor Agents

Anti-angiogenic therapy is a recent approach in cancer therapeutics targeting the formation of blood vessels that are necessary for tumor growth. Recently, the anti-angiogenic molecule bevacizumab (Avastin) has gained approval from the FDA for the first-line treatment of metastatic colon cancer in combination with standard chemotherapy.

Human protein tissue inhibitor of metalloproteinases-2 (TIMP-2) has been shown to inhibit angiogenesis *in vivo* independent of metalloproteinase inhibition. This technology discloses new peptide sequences derived from TIMP-2. They retain their *in vivo* anti-angiogenic property acting via the same mechanism as TIMP-2 and some of them have significantly higher activity than TIMP-2. Anti-angiogenic peptidomimetics based on this technology can be developed for the treatment of angiogenesis associated diseases.

Data from both experimental studies have demonstrated the effectiveness of the current technology.

Proper management of Hepatocellular carcinoma has been a challenge due to the lack of accurate biomarkers that will help in early diagnosis and prognosis of the disease. The technology has the potential of accurately diagnosing early stage disease, and monitoring drug response. This will impact the lives of several thousand individuals dying from the disease.

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